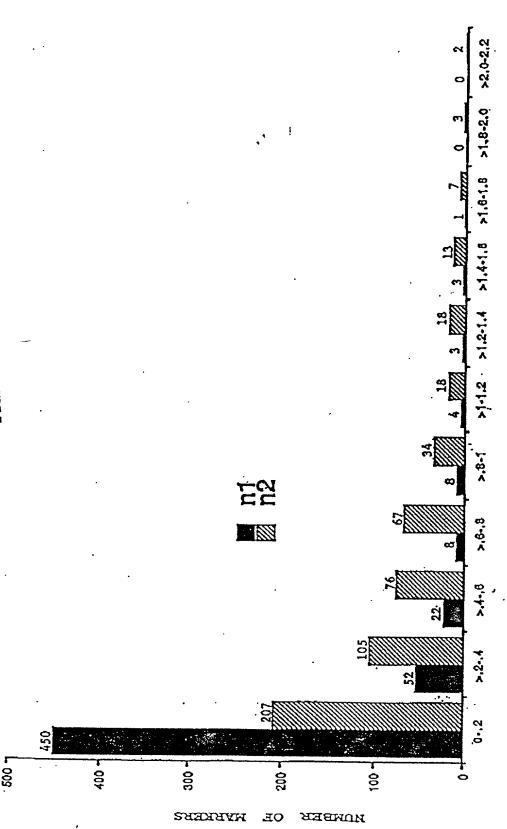
-3

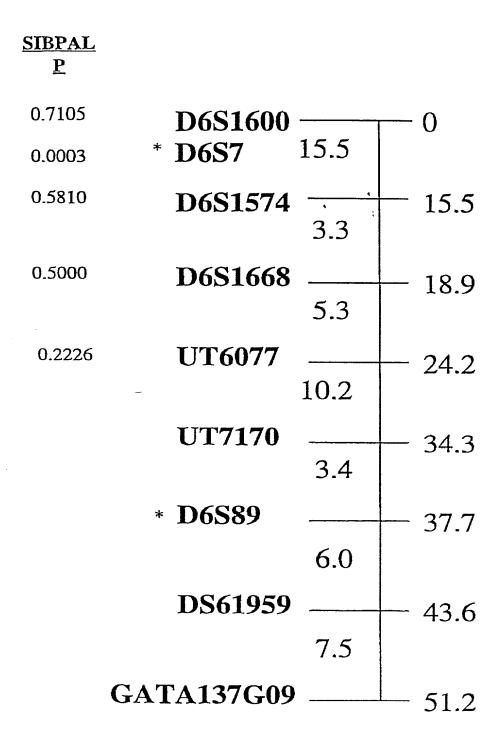
PED. 310 ANCESTRAL TRACE FOR AMISH STUDY BIPOLAR PEDIGREES PED. 210 Richt Ext. 110 Progenttor CIRCA 1750 CORE PEDIGREE 110 LEFT EXT. 110





CLASS BOUNDS

MAX LOD SCORES



* = NG morkers/values

Figure 3

SIBPAL P

	D13S56h1		0.0
	D13S56h2	11.6	0.0
0.0865	* D13S291 D13S37	6.8	11.6
0.0171	GATA125CO4 * D13S218	2.8	18.4
0.4336	D13S894 * D13S1m	6.1	21.2
0.0003	* D13S1ti	0.0	27.3
0.4905	* D13S171	5.2	32.5
0.1593	D13S260	3.8	36.3
0.1393	D13S260	10.4	46.7
		6.5	
	D13S232		53.2

Figure 4

Inventors: Edward I. Ginns *et al.*Application No.: 09/881,012– June 13, 2001
Attorney Docket No.: 015280-248120 – sheet 5 of 13

SIBPAL P		1	0.0
	D15S114	11.1	
0.1449	299yf	5.8	11.1
0.0411	D15S131	7,8	16.8
0.2091	D15S153	7.6	24.6
0.0114	* D15S36		32.2
0.0003	* D15S45	1.	
0.0433	D15S159	1.5	
0.0217	* D15S148		33.6
0.1020	135yc	1.4	35.0
	D15S1033		33.0
	D15S150 D15S38	1.7	36.7
	* D15S117	5.6	
	GATA153F11	5.1	42.3
	D15S962		47.4
	D15S48ml	1.2	42.6
	189ус	2.4	48.6

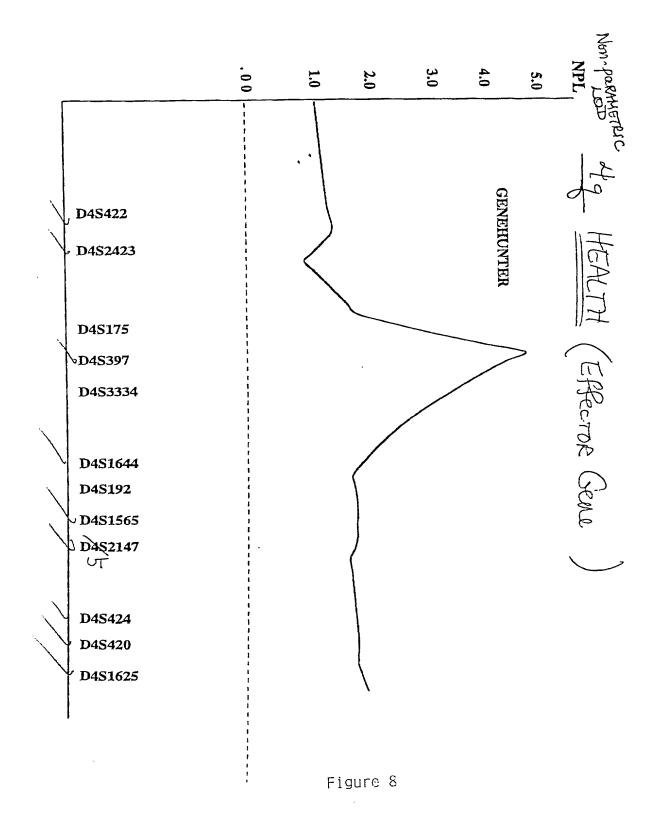
Figure 5

SIBPAL P Value		
D4S412 —		T 0.0
O. 5241	13.6	13.6
D4S431 —	1.2	14.8
D4S431a —	0.9	15.7
0.Dの2 — D4S2366 —	1.0	16.7
D4S394a —	3.2	
\circ .0015 \rightarrow D4S3007	2.1	19.8
0.0035 TD4S394 -		21.9
0,0000-D4S2949-	9.4	
O.0626 -D4S1605	2.5	31.3
0,0005 _D4S1582 -	0.5	33.8
D4S107m D4S403 —		 34.3
O.0002-D4S419 —	7.6	
	6.2	41.9
0,0004 — D4S404 —	6.6	48.1
D4S391	12.1	 54.7
D4S405 -	12.1	66.8

Figure 6

SIBPAL P			
	D4S100	7.4	0.0
	D4S406		7.4
	D4S1611	3.9	
	D4S101t		
	UT7739	2.7	11.4
	D4S1573	3.7	15.0
-0 000T	D4S402	1 2.6	17.6
<0.0001		1.2	
0.0001	D4S109		18.9
	D4S427	8.6	
	D4S1615	8.4	 27.5
	D4S2959		 35.9
	D4S1576	5.6	 41.5
	D4S422	4.5	 46.0
	D4S2423	1.4	
	D4S422a	1.8	47.4
<0.0001	D4S175		49.2
<0.0001	D4S397	2.6	
	D4S3334	2.5	51.8
	D4S1644		 54.3
	D4S192	3.4	
	D4S1565		
	UT2147		57.7
0.0003		2.7	60.4
0.0003	D4S424	2.2	- 00.4
	D4S420		- 62.6
	D4S1625	4.8	
	UT1264	15 2	 67.3
	D4S413	15.3	- 82.7
	GATA8A0	5	

Figure 7



Finure 1. Genetic, Physical, and Transcription Unit Mapping of the Clock Locus

Figure 9

Inventors: Edward I. Ginns et al.
Application No.: 09/881,012– June 13, 2001
Attorney Docket No.: 015280-248120 -- sheet 10 of 13

AMISH STUDY BIPOLAR PEDIGREE EXTENSIONS PROGENITOR 1700-1750

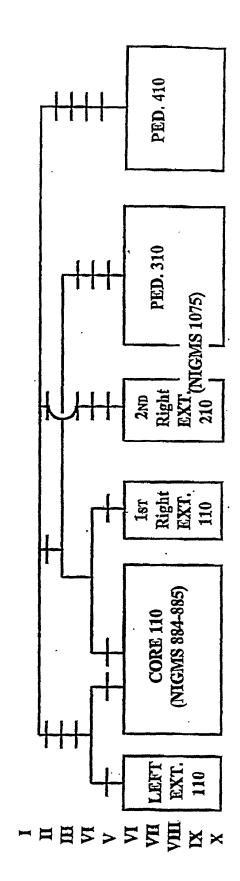


Figure 10

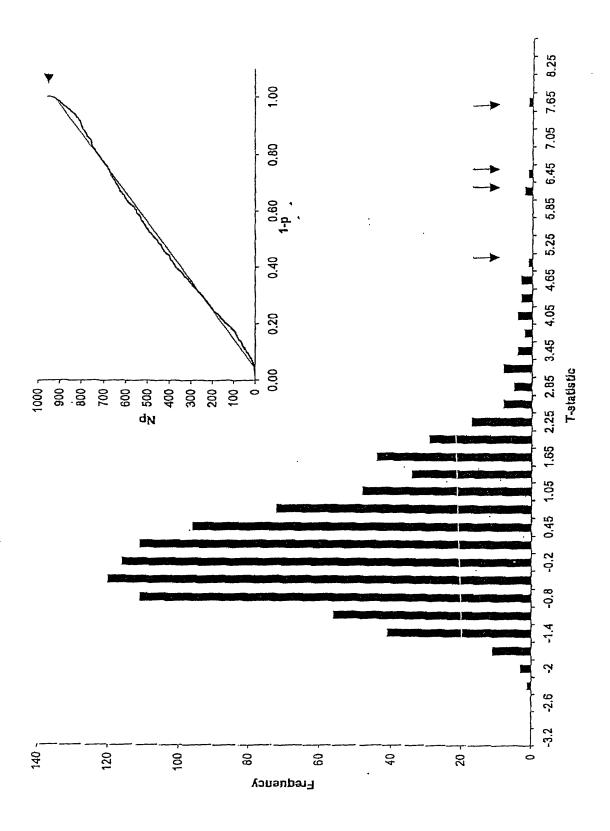


Figure 11

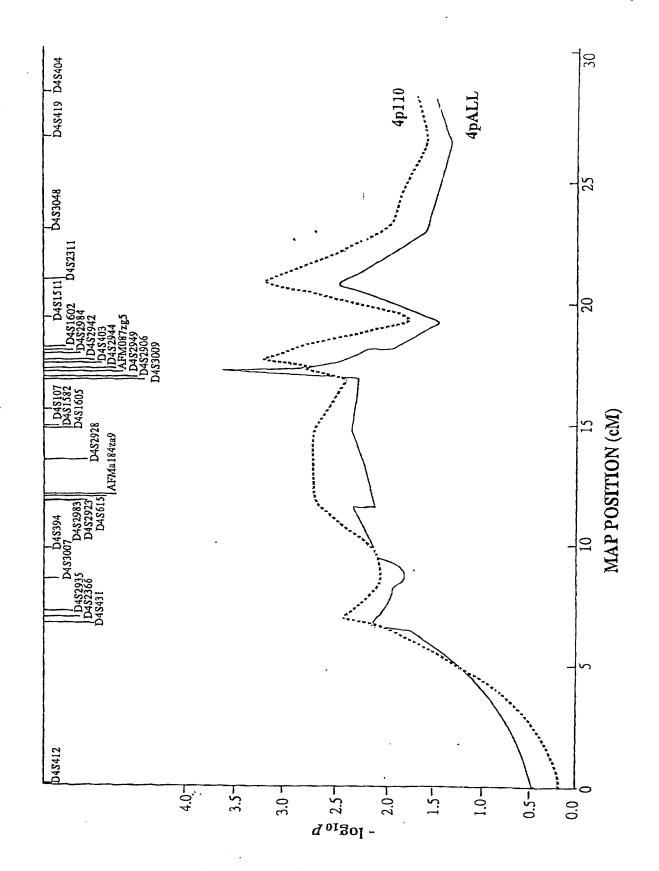


Figure 12A

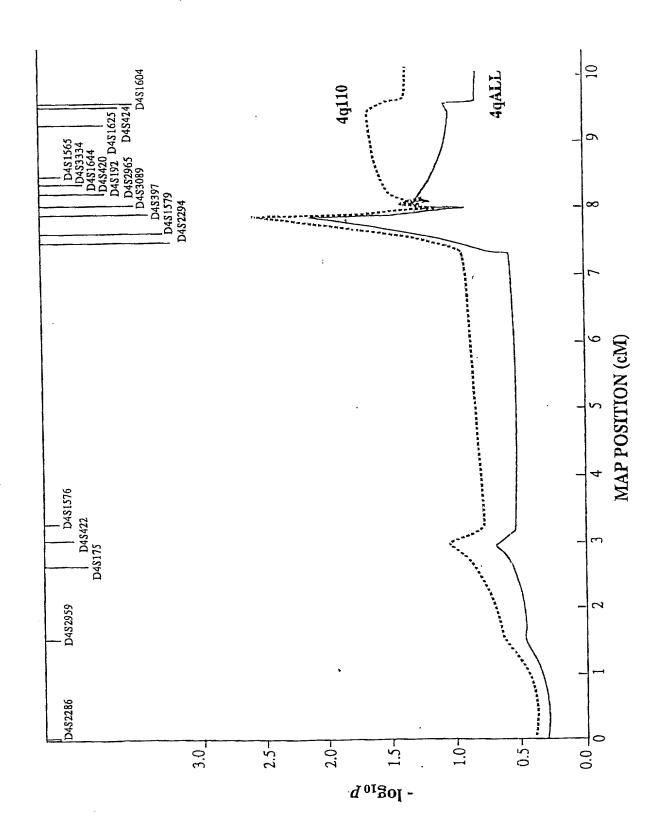


Figure 12B